

Calendar No. 403

108TH CONGRESS
1ST SESSION

S. 1218

[Report No. 108–203]

To provide for Presidential support and coordination of interagency ocean science programs and development and coordination of a comprehensive and integrated United States research and monitoring program.

IN THE SENATE OF THE UNITED STATES

JUNE 10, 2003

Mr. HOLLINGS (for himself, Mr. STEVENS, Mr. INOUE, Mr. BREAUX, Mr. KERRY, Mr. LAUTENBERG, Ms. CANTWELL, Mr. NELSON of Florida, Mr. LEVIN, and Mr. DEWINE) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

NOVEMBER 19, 2003

Reported by Mr. MCCAIN, with an amendment

[Strike all after the enacting clause and insert the part printed in italic]

A BILL

To provide for Presidential support and coordination of interagency ocean science programs and development and coordination of a comprehensive and integrated United States research and monitoring program.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Oceans and Human
3 Health Act”.

4 **SEC. 2. FINDINGS AND PURPOSES.**

5 (a) **FINDINGS.**—The Congress makes the following
6 findings:

7 (1) The rich biodiversity of marine organisms
8 provides society with an essential biomedical re-
9 source, a promising source of novel compounds with
10 therapeutic potential, and a potentially important
11 contribution to the national economy.

12 (2) The diversity of ocean life and research on
13 the health of marine organisms, including marine
14 mammals and other sentinel species, helps scientists
15 in their efforts to investigate and understand human
16 physiology and biochemical processes, as well as pro-
17 viding a means for monitoring the health of marine
18 ecosystems.

19 (3) The oceans drive climate and weather fac-
20 tors causing severe weather events and shifts in tem-
21 perature and rainfall patterns that affect the density
22 and distribution of disease-causing organisms and
23 the ability of public health systems to address them.

24 (4) The oceans act as a route of exposure for
25 human disease and illnesses through ingestion of
26 contaminated seafood and direct contact with sea-

1 water containing toxins and disease-causing orga-
2 nisms.

3 (5) During the past two decades, the incidence
4 of harmful blooms of algae has increased around the
5 world, contaminating shellfish, causing widespread
6 fish kills, threatening marine environmental quality
7 and resulting in substantial economic losses to coast-
8 al communities.

9 (6) Existing Federal programs and resources
10 support research in a number of these areas, but
11 gaps in funding, coordination, and outreach have im-
12 peded national progress in addressing ocean health
13 issues.

14 (7) National investment in a coordinated pro-
15 gram of research and monitoring would improve un-
16 derstanding of marine ecosystems, allow prediction
17 and prevention of marine public health problems and
18 assist in realizing the potential of the oceans to con-
19 tribute to the development of effective new treat-
20 ments of human diseases and a greater under-
21 standing of human biology.

22 (b) PURPOSES.—The purposes of this Act are to pro-
23 vide for—

24 (1) Presidential support and coordination of
25 interagency ocean science programs; and

1 (2) development and coordination of a com-
 2 prehensive and integrated United States research
 3 and monitoring program that will assist this Nation
 4 and the world to understand, use and respond to the
 5 role of the oceans in human health.

6 **SEC. 3. NATIONAL SCIENCE AND TECHNOLOGY COUNCIL.**

7 (a) **DIRECTOR OF OFFICE OF SCIENCE AND TECH-**
 8 **NOLOGY POLICY TO CHAIR COUNCIL.**—Section 207(a) of
 9 the National Science and Technology Policy, Organization,
 10 and Priorities Act of 1976 (42 U.S.C. 6616(a)) is amend-
 11 ed—

12 (1) by striking “CHAIRMAN OF FEDERAL CO-
 13 ORDINATING COUNCIL FOR SCIENCE, ENGINEERING,
 14 AND TECHNOLOGY” in the subsection heading and
 15 inserting “CHAIR OF THE NATIONAL SCIENCE AND
 16 TECHNOLOGY COUNCIL”; and

17 (2) by striking paragraph (1) and inserting the
 18 following:

19 “(1) serve as Chair of the National Science and
 20 Technology Council; and”.

21 (b) **FUNCTIONS.**—Section 401 of the National
 22 Science and Technology Policy, Organization, and Prior-
 23 ities Act of 1976 (42 U.S.C. 6651) is amended to read
 24 as follows:

1 ~~“SEC. 401. FUNCTIONS OF COUNCIL.~~

2 ~~“(a) IN GENERAL.—The National Science and Tech-~~
 3 ~~nology Council (hereinafter referred to as the ‘Council’)~~
 4 ~~shall consider problems and developments in the fields of~~
 5 ~~science, engineering, and technology and related activities~~
 6 ~~affecting more than one Federal agency, and shall rec-~~
 7 ~~ommend policies and other measures designed to—~~

8 ~~“(1) provide more effective planning and ad-~~
 9 ~~ministration of Federal scientific, engineering, and~~
 10 ~~technology programs;~~

11 ~~“(2) identify research needs, including areas re-~~
 12 ~~quiring additional emphasis;~~

13 ~~“(3) achieve more effective use of the scientific,~~
 14 ~~engineering, and technological resources and facili-~~
 15 ~~ties of Federal agencies, including elimination of un-~~
 16 ~~warranted duplication; and~~

17 ~~“(4) further international cooperation in~~
 18 ~~science, engineering and technology.~~

19 ~~“(b) COORDINATION.—The Council may be assigned~~
 20 ~~responsibility for developing long-range and coordinated~~
 21 ~~plans for scientific and technical research which involve~~
 22 ~~the participation of more than 2 agencies. Such plans~~
 23 ~~shall—~~

24 ~~“(1) identify research approaches and priorities~~
 25 ~~which most effectively advance scientific under-~~
 26 ~~standing and provide a basis for policy decisions;~~

1 ~~“(2) provide for effective cooperation and co-~~
 2 ~~ordination of research among Federal agencies; and~~

3 ~~“(3) encourage domestic and, as appropriate,~~
 4 ~~international cooperation among government, indus-~~
 5 ~~try and university scientists.~~

6 ~~“(e) OTHER DUTIES.—The Council shall perform~~
 7 ~~such other related advisory duties as shall be assigned by~~
 8 ~~the President or by the Chair of the Council.~~

9 ~~“(d) ASSISTANCE OF OTHER AGENCIES.—For the~~
 10 ~~purpose of carrying out the provisions of this section, each~~
 11 ~~Federal agency represented on the Council shall furnish~~
 12 ~~necessary assistance to the Council. Such assistance may~~
 13 ~~include—~~

14 ~~“(1) detailing employees to the Council to per-~~
 15 ~~form such functions, consistent with the purposes of~~
 16 ~~this section, as the Chairman of the Council may as-~~
 17 ~~sign to them; and~~

18 ~~“(2) undertaking upon the request of the Chair,~~
 19 ~~such special studies for the Council as come within~~
 20 ~~the scope of authority of the Council.~~

21 ~~“(e) STANDING COMMITTEES; WORKING GROUPS.—~~
 22 ~~For the purpose of developing interagency plans, con-~~
 23 ~~ducting studies, and making reports as directed by the~~
 24 ~~Chairman, standing committees and working groups of the~~
 25 ~~Council may be established.”.~~

1 **SEC. 4. INTERAGENCY OCEANS AND HUMAN HEALTH RE-**
2 **SEARCH PROGRAM.**

3 ~~(a) ESTABLISHMENT OF COMMITTEE.—~~

4 ~~(1) The National Science and Technology~~
5 ~~Council shall coordinate and support a national re-~~
6 ~~search program to improve understanding of the role~~
7 ~~of the oceans in human health. In planning the pro-~~
8 ~~gram, the Council shall establish a Committee on~~
9 ~~Oceans and Human Health that shall consist of rep-~~
10 ~~resentatives from those agencies with programs or~~
11 ~~missions that could contribute to or benefit from the~~
12 ~~program. The Committee shall consist of at least one~~
13 ~~representative from—~~

14 ~~(A) the National Oceanic and Atmospheric~~
15 ~~Administration;~~

16 ~~(B) the National Science Foundation;~~

17 ~~(C) the National Institute of Environ-~~
18 ~~mental Health Sciences and other institutes~~
19 ~~within the National Institutes of Health;~~

20 ~~(D) the Centers for Disease Control;~~

21 ~~(E) the Environmental Protection Agency;~~

22 ~~(F) the Food and Drug Administration;~~

23 ~~(G) the Department of Homeland Security;~~

24 and

25 ~~(H) such other agencies and departments~~
26 ~~as the Council deems appropriate.~~

1 (2) The members of the Committee biennially
2 shall select one of its members to serve as Chair.
3 The Chair shall be knowledgeable and experienced
4 with regard to the administration of scientific re-
5 search programs, and shall be a representative of an
6 agency that contributes substantially, in terms of
7 scientific research capability and budget, to the
8 interagency program.

9 (b) IMPLEMENTATION PLAN.—Within one year after
10 the date of enactment of this Act, the Chair of the Na-
11 tional Science and Technology Council, through the Com-
12 mittee on the Oceans and Human Health, shall develop
13 and submit to the Congress a plan for coordinated Federal
14 activities under the program. In developing the plan, the
15 Committee will consult with the Inter-Agency Task Force
16 on Harmful Algal Blooms and Hypoxia. Such plan will
17 build on and complement the ongoing activities of the Na-
18 tional Oceanic and Atmospheric Administration, the Na-
19 tional Science Foundation, the National Institute of Envi-
20 ronmental Health Sciences, and other departments and
21 agencies and shall—

22 (1) establish, for the 10-year period beginning
23 in the year it is submitted, the goals and priorities
24 for Federal research which most effectively advance
25 scientific understanding of the connections between

1 the oceans and human health, provide usable infor-
2 mation for the prediction and prevention of marine
3 public health problems and use the biological poten-
4 tial of the oceans for development of new treatments
5 of human diseases and a greater understanding of
6 human biology;

7 (2) describe specific activities required to
8 achieve such goals and priorities, including establish-
9 ment of national centers of excellence, the funding
10 of competitive research grants, ocean and coastal ob-
11 servations, training and support for scientists, and
12 participation in international research efforts;

13 (3) identify and address, as appropriate, rel-
14 evant programs and activities of the Federal agen-
15 cies and departments that would contribute to the
16 program;

17 (4) consider and use, as appropriate, reports
18 and studies conducted by Federal agencies and de-
19 partments, the National Research Council, the
20 Ocean Research Advisory Panel, the Commission on
21 Ocean Policy and other entities;

22 (5) make recommendations for the coordination
23 of program activities with ocean and human health-
24 related activities of other national and international
25 organizations; and

1 ~~(6) estimate Federal funding for research ac-~~
2 ~~tivities to be conducted under the program.~~

3 ~~(c) PROGRAM SCOPE.—The program shall include the~~
4 ~~following activities related to the role of oceans in human~~
5 ~~health.~~

6 ~~(1) Interdisciplinary research among the ocean~~
7 ~~and medical sciences; and coordinated research and~~
8 ~~activities to improve understanding of processes~~
9 ~~within the ocean that may affect human health and~~
10 ~~to explore the potential contribution of marine orga-~~
11 ~~nisms to medicine and research, including—~~

12 ~~(A) vector- and water-borne diseases of hu-~~
13 ~~mans and marine organisms, including marine~~
14 ~~mammals and fish;~~

15 ~~(B) harmful algal blooms;~~

16 ~~(C) marine-derived pharmaceuticals;~~

17 ~~(D) marine organisms as models for bio-~~
18 ~~medical research and as indicators of marine~~
19 ~~environmental health;~~

20 ~~(E) marine environmental microbiology;~~

21 ~~(F) bioaccumulative and endocrine-dis-~~
22 ~~rupting chemical contaminants; and~~

23 ~~(G) predictive models based on indicators~~
24 ~~of marine environmental health.~~

1 (2) Coordination with the National Ocean Re-
2 search Leadership Council (10 U.S.C. 7902(a)) to
3 ensure that any integrated ocean and coastal observ-
4 ing system provides information necessary to mon-
5 itor, predict and reduce marine public health prob-
6 lems including—

7 (A) baseline observations of physical ocean
8 properties to monitor climate variation;

9 (B) measurement of oceanic and atmos-
10 pheric variables to improve prediction of severe
11 weather events;

12 (C) compilation of global health statistics
13 for analysis of the effects of oceanic events on
14 human health;

15 (D) documentation of harmful algal
16 blooms; and

17 (E) development and implementation of
18 sensors to measure biological processes; acquire
19 health-related data on biological populations
20 and detect contaminants in marine waters and
21 seafood.

22 (3) Development through partnerships among
23 Federal agencies, States, or academic institutions of
24 new technologies and approaches for detecting and
25 reducing hazards to human health from ocean

sources and to strengthen understanding of the value of marine biodiversity to biomedicine, including—

(A) genomics and proteomics to develop genetic and immunological detection approaches and predictive tools and to discover new biomedical resources;

(B) biomaterials and bioengineering;

(C) in situ and remote sensors to detect and quantify contaminants in marine waters and organisms and to identify new genetic resources;

(D) techniques for supplying marine resources, including chemical synthesis, culturing and aquaculturing marine organisms, new fermentation methods and recombinant techniques; and

(E) adaptation of equipment and technologies from human health fields.

(4) Support for scholars, trainees and education opportunities that encourage an interdisciplinary and international approach to exploring the diversity of life in the oceans.

1 **SEC. 5. NATIONAL OCEANIC AND ATMOSPHERIC ADMINIS-**
 2 **TRATION OCEANS AND HUMAN HEALTH PRO-**
 3 **GRAM.**

4 (a) **ESTABLISHMENT.**—As part of the interagency
 5 program planned and coordinated under section 4, the
 6 Secretary of Commerce shall establish an Oceans and
 7 Human Health Program to coordinate and implement re-
 8 search and activities of the National Oceanic and Atmos-
 9 pheric Administration related to the role of the oceans in
 10 human health. In establishing the program, the Secretary
 11 shall consult with other Federal agencies conducting inte-
 12 grated oceans and human health research and research in
 13 related areas, including the Centers for Disease Control,
 14 the National Science Foundation, and the National Insti-
 15 tute of Environmental Health Sciences. The Oceans and
 16 Human Health Program shall provide support for—

- 17 (1) a program and research coordination office;
- 18 (2) an advisory panel;
- 19 (3) one or more National Oceanic and Atmos-
- 20 pheric Administration national centers of excellence;
- 21 (4) research grants; and
- 22 (5) distinguished scholars and traineeships.

23 (b) **PROGRAM OFFICE.**—The Secretary shall establish
 24 a program office to identify and coordinate oceans and
 25 human health-related research and activities within the
 26 National Oceanic and Atmospheric Administration and

1 carry out the elements of the program. The program office
 2 will provide support for administration of the program
 3 and, in cooperation with the oceans and human health ad-
 4 visory panel, will serve as liaison with academic institu-
 5 tions and other agencies participating in the interagency
 6 oceans and human health research program planned and
 7 coordinated under section 3.

8 (c) ADVISORY PANEL.—The Secretary shall establish
 9 an oceans and human health advisory panel to assist in
 10 the development and implementation of the Oceans and
 11 Human Health Program. Membership of the advisory
 12 group shall provide for balanced representation of individ-
 13 uals with multi-disciplinary expertise in the marine and
 14 biomedical sciences. The Federal Advisory Committee Act
 15 (5 U.S.C. App.) shall not apply to the oceans and human
 16 health advisory panel.

17 (d) NATIONAL CENTERS.—

18 (1) The Secretary shall identify and provide fi-
 19 nancial support through a competitive process to de-
 20 velop, within the National Oceanic and Atmospheric
 21 Administration, for one or more centers of excellence
 22 that strengthen the capabilities of the Administra-
 23 tion to carry out programs and activities related to
 24 the oceans' role in human health. Such centers shall
 25 complement and be in addition to the centers estab-

lished by the National Science Foundation and the National Institute of Environmental Health Sciences.

(2) The centers shall focus on areas related to agency missions, including use of marine organisms as indicators for marine environmental health, ocean pollutants, marine toxins and pathogens, harmful algal blooms, seafood testing, drug discovery, and biology and pathobiology of marine mammals, and on disciplines including marine genomics, marine environmental microbiology, ecological chemistry and conservation medicine.

(3) In selecting centers for funding, the Secretary will consider the need for geographic representation and give priority to proposals with strong interdisciplinary scientific merit that encourage educational opportunities and provide for effective partnerships among the Administration, other Federal entities, State, academic, medical, and industry participants.

(c) RESEARCH GRANTS.—

(1) The Secretary is authorized to provide grants of financial assistance for critical research and projects that explore the relationship between the oceans and human health and that complement

1 or strengthen Administration programs and activi-
 2 ties related to the ocean's role in human health. The
 3 Secretary shall consult with the oceans and human
 4 health advisory panel established under subsection
 5 (e) and the National Sea Grant College Program
 6 and may work cooperatively with other agencies par-
 7 ticipating in the interagency program under section
 8 3 to establish joint criteria for such research and
 9 projects.

10 (2) Grants under this subsection shall be
 11 awarded through a peer-review process that may be
 12 conducted jointly with other agencies participating
 13 in the interagency program established in section 3
 14 or under the National Oceanographic Partnership
 15 Program under section 7901 of title 10, United
 16 States Code.

17 (f) DISTINGUISHED SCHOLARS AND
 18 TRAINEESHIPS.—

19 (1) The Secretary shall designate and provide
 20 financial assistance to support distinguished scholars
 21 from academic institutions, industry or State gov-
 22 ernments for collaborative work with scientists and
 23 facilities of the Administration.

24 (2) In consultation with the Directors of the
 25 National Institutes of Health and the National

1 Science Foundation, the Secretary of Commerce may
2 establish a program to provide training and experi-
3 ence to scientists at the beginning of their careers
4 who are interested in the role of the oceans in
5 human health.

6 **SEC. 6. PUBLIC INFORMATION AND OUTREACH.**

7 (a) **ESTABLISHMENT.**—The Secretary of Commerce,
8 in consultation with the Centers for Disease Control, the
9 Food and Drug Administration, the Environmental Pro-
10 tection Agency and the States, shall design and implement
11 a national public information and outreach program on
12 potential ocean-related human health risks, including
13 health hazards associated with the human consumption of
14 seafood. Under such program, the Secretary shall—

15 (1) collect and analyze information on ocean-re-
16 lated health hazards and illnesses, including infor-
17 mation on the number of individuals affected, causes
18 and geographic location of the hazard or illness;

19 (2) disseminate the results of the analysis to
20 any appropriate Federal or State agency, the public,
21 involved industries, and other interested persons;

22 (3) provide advice regarding precautions that
23 may be taken to safeguard against the hazard or ill-
24 ness; and

1 (4) assess and make recommendations for ob-
 2 serving systems to support the program.

3 (b) ~~SEAFOOD SAFETY.~~—To address health hazards
 4 associated with human consumption of seafood, the Sec-
 5 retary, in consultation with the Centers for Disease Con-
 6 trol, the Food and Drug Administration, the Environ-
 7 mental Protection Agency and the States, shall assess
 8 risks related to—

9 (1) seafood that is domestically harvested and
 10 processed as compared with imported seafood that is
 11 harvested and processed outside the United States;

12 (2) seafood that is commercially harvested and
 13 processed as compared with that harvested for rec-
 14 reational or subsistence purposes and not prepared
 15 commercially; and

16 (3) contamination originating from certain
 17 practices that occur both prior to and after sale of
 18 seafood to consumers, especially those connected to
 19 the manner in which consumers handle and prepare
 20 seafood.

21 **SEC. 7. AUTHORIZATION OF APPROPRIATIONS.**

22 (a) ~~NOAA OCEANS AND HUMAN HEALTH PRO-~~
 23 ~~GRAM.~~—There are authorized to be appropriated to the
 24 Secretary of Commerce to carry out the NOAA Oceans
 25 and Human Health program established under section 5;

1 \$8,000,000 for fiscal year 2004, \$15,000,000 for fiscal
 2 year 2005, and \$20,000,000 annually for fiscal year 2006
 3 through fiscal year 2008.

4 (b) **PUBLIC INFORMATION.**—There are authorized to
 5 be appropriated to the Secretary to carry out the public
 6 information and outreach program established under sec-
 7 tion 6, \$5,000,000 for each of fiscal years 2004 through
 8 2007.

9 **SECTION 1. SHORT TITLE.**

10 *This Act may be cited as the “Oceans and Human*
 11 *Health Act”.*

12 **SEC. 2. FINDINGS AND PURPOSES.**

13 (a) **FINDINGS.**—*The Congress makes the following*
 14 *findings:*

15 (1) *The rich biodiversity of marine organisms*
 16 *provides society with an essential biomedical resource,*
 17 *a promising source of novel compounds with thera-*
 18 *peutic potential, and a potentially important con-*
 19 *tribution to the national economy.*

20 (2) *The diversity of ocean life and research on*
 21 *the health of marine organisms, including marine*
 22 *mammals and other sentinel species, helps scientists*
 23 *in their efforts to investigate and understand human*
 24 *physiology and biochemical processes, as well as pro-*

1 *viding a means for monitoring the health of marine*
2 *ecosystems.*

3 *(3) The oceans drive climate and weather factors*
4 *causing severe weather events and shifts in tempera-*
5 *ture and rainfall patterns that affect the density and*
6 *distribution of disease-causing organisms and the*
7 *ability of public health systems to address them.*

8 *(4) The oceans act as a route of exposure for*
9 *human disease and illnesses through ingestion of con-*
10 *taminated seafood and direct contact with seawater*
11 *containing toxins and disease-causing organisms.*

12 *(5) During the past two decades, the incidence of*
13 *harmful blooms of algae and hypoxia has increased in*
14 *United States coastal waters, including the Great*
15 *Lakes, and around the world, contaminating shellfish,*
16 *causing widespread fish kills, threatening marine en-*
17 *vironmental quality and resulting in substantial eco-*
18 *nomie losses to coastal communities.*

19 *(6) Existing Federal programs and resources*
20 *support research in a number of these areas, but gaps*
21 *in funding, coordination, and outreach have impeded*
22 *national progress in addressing ocean health issues.*

23 *(7) National investment in a coordinated pro-*
24 *gram of research and monitoring would improve un-*
25 *derstanding of marine ecosystems, allow prediction*

1 *and prevention of marine public health problems and*
 2 *assist in realizing the potential of the oceans to con-*
 3 *tribute to the development of effective new treatments*
 4 *of human diseases and a greater understanding of*
 5 *human biology.*

6 *(b) PURPOSES.—The purposes of this Act are to pro-*
 7 *vide for—*

8 *(1) Presidential support and coordination of*
 9 *interagency ocean science programs; and*

10 *(2) development and coordination of a com-*
 11 *prehensive and integrated United States ocean, coast-*
 12 *al, and Great Lakes research and monitoring pro-*
 13 *gram that will assist this Nation and the world to*
 14 *understand, use and respond to the role of the oceans*
 15 *in human health.*

16 **SEC. 3. INTERAGENCY OCEANS AND HUMAN HEALTH RE-**
 17 **SEARCH PROGRAM.**

18 *(a) ESTABLISHMENT OF COMMITTEE.—*

19 *(1) The President, through the National Science*
 20 *and Technology Council, shall coordinate and support*
 21 *a national research program to improve under-*
 22 *standing of the role of the oceans in human health.*
 23 *In planning the program, the Council shall establish*
 24 *or designate a Committee on Oceans and Human*
 25 *Health that shall consist of representatives from those*

1 *agencies with programs or missions that could con-*
 2 *tribute to or benefit from the program. The Committee*
 3 *shall consist of at least one representative from—*

4 *(A) the National Oceanic and Atmospheric*
 5 *Administration;*

6 *(B) the National Science Foundation;*

7 *(C) the National Institute of Environmental*
 8 *Health Sciences and other institutes within the*
 9 *National Institutes of Health;*

10 *(D) the Centers for Disease Control;*

11 *(E) the Environmental Protection Agency;*

12 *(F) the Food and Drug Administration;*

13 *(G) the Department of Defense;*

14 *(H) the Department of Homeland Security;*

15 *and*

16 *(I) such other agencies and departments as*
 17 *the Council deems appropriate.*

18 *(2) The members of the Committee biennially*
 19 *shall select one of its members to serve as Chair. The*
 20 *Chair shall be knowledgeable and experienced with re-*
 21 *gard to the administration of scientific research pro-*
 22 *grams, and shall be a representative of an agency that*
 23 *contributes, in terms of scientific research capability*
 24 *and budget, to the interagency program.*

1 (b) *IMPLEMENTATION PLAN.*—Within 1 year after the
2 date of enactment of this Act, the Chair of the National
3 Science and Technology Council, through the Committee on
4 the Oceans and Human Health, shall develop and submit
5 to the Congress a plan for coordinated Federal activities
6 under the program. Nothing in this subsection is intended
7 to duplicate or supersede the activities of the Inter-Agency
8 Task Force on Harmful Algal Blooms and Hypoxia estab-
9 lished under section 603 of the Harmful Algal Bloom and
10 Hypoxia Research and Control Act of 1998 (16 U.S.C. 1451
11 note). In developing the plan, the Committee will consult
12 with the Inter-Agency Task Force on Harmful Algal Blooms
13 and Hypoxia. Such plan will build on and complement the
14 ongoing activities of the National Oceanic and Atmospheric
15 Administration, the National Science Foundation, the Na-
16 tional Institute of Environmental Health Sciences, and
17 other departments and agencies and shall—

18 (1) establish, for the 10-year period beginning in
19 the year it is submitted, the goals and priorities for
20 Federal research which most effectively advance sci-
21 entific understanding of the connections between the
22 oceans and human health, provide usable information
23 for the prediction and prevention of marine-related
24 public health problems and use the biological poten-
25 tial of the oceans for development of new treatments

1 *of human diseases and a greater understanding of*
2 *human biology;*

3 *(2) describe specific activities required to achieve*
4 *such goals and priorities, including establishment of*
5 *national centers of excellence, the funding of competi-*
6 *tive research grants, ocean and coastal observations,*
7 *training and support for scientists, and participation*
8 *in international research efforts;*

9 *(3) identify and address, as appropriate, rel-*
10 *evant programs and activities of the Federal agencies*
11 *and departments that would contribute to the pro-*
12 *gram;*

13 *(4) consider and use, as appropriate, reports and*
14 *studies conducted by Federal agencies and depart-*
15 *ments, the National Research Council, the Ocean Re-*
16 *search Advisory Panel, the Commission on Ocean Pol-*
17 *icy and other expert scientific bodies;*

18 *(5) make recommendations for the coordination*
19 *of program activities with ocean and human health-*
20 *related activities of other national and international*
21 *organizations; and*

22 *(6) estimate Federal funding for research activi-*
23 *ties to be conducted under the program.*

1 (c) *PROGRAM SCOPE.*—*The program shall include the*
2 *following activities related to the role of oceans in human*
3 *health:*

4 (1) *Interdisciplinary research among the ocean*
5 *and medical sciences, and coordinated research and*
6 *activities to improve understanding of processes with-*
7 *in the ocean that may affect human health and to ex-*
8 *plore the potential contribution of marine organisms*
9 *to medicine and research, including—*

10 (A) *vector- and water-borne diseases of hu-*
11 *mans and marine organisms, including marine*
12 *mammals and fish;*

13 (B) *harmful algal blooms and hypoxia;*

14 (C) *marine-derived pharmaceuticals;*

15 (D) *marine organisms as models for bio-*
16 *medical research and as indicators of marine en-*
17 *vironmental health;*

18 (E) *marine environmental microbiology;*

19 (F) *bioaccumulative and endocrine-dis-*
20 *rupting chemical contaminants; and*

21 (G) *predictive models based on indicators of*
22 *marine environmental health or public health*
23 *threats.*

24 (2) *Coordination with the National Ocean Re-*
25 *search Leadership Council (10 U.S.C. 7902(a)) to en-*

1 *sure that any integrated ocean and coastal observing*
 2 *system provides information necessary to monitor,*
 3 *predict and reduce marine public health problems in-*
 4 *cluding—*

5 *(A) baseline observations of physical ocean*
 6 *properties to monitor climate variation;*

7 *(B) measurement of oceanic and atmos-*
 8 *pheric variables to improve prediction of severe*
 9 *weather events;*

10 *(C) compilation of global health statistics*
 11 *for analysis of the effects of oceanic events on*
 12 *human health;*

13 *(D) documentation of harmful algal blooms*
 14 *and hypoxia; and*

15 *(E) development and implementation of*
 16 *sensors to measure biological processes, acquire*
 17 *health-related data on biological populations and*
 18 *detect contaminants in marine waters and sea-*
 19 *food.*

20 *(3) Development through partnerships among*
 21 *Federal agencies, States, or academic institutions of*
 22 *new technologies and approaches for detecting and re-*
 23 *ducing hazards to human health from ocean sources*
 24 *and to strengthen understanding of the value of ma-*
 25 *rine biodiversity to biomedicine, including—*

1 (A) *genomics and proteomics to develop ge-*
 2 *netic and immunological detection approaches*
 3 *and predictive tools and to discover new bio-*
 4 *medical resources;*

5 (B) *biomaterials and bioengineering;*

6 (C) *in situ and remote sensors to detect and*
 7 *quantify contaminants in marine waters and or-*
 8 *ganisms and to identify new genetic resources;*

9 (D) *techniques for supplying marine re-*
 10 *sources, including chemical synthesis, culturing*
 11 *and aquaculturing marine organisms, new fer-*
 12 *mentation methods and recombinant techniques;*
 13 *and*

14 (E) *adaptation of equipment and tech-*
 15 *nologies from human health fields.*

16 (4) *Support for scholars, trainees and education*
 17 *opportunities that encourage an interdisciplinary and*
 18 *international approach to exploring the diversity of*
 19 *life in the oceans.*

20 **SEC. 4. NATIONAL OCEANIC AND ATMOSPHERIC ADMINIS-**
 21 **TRATION OCEANS AND HUMAN HEALTH INI-**
 22 **TIATIVE.**

23 (a) *ESTABLISHMENT.*—*As part of the interagency pro-*
 24 *gram planned and coordinated under section 3, the Sec-*
 25 *retary of Commerce shall establish an Oceans and Human*

1 *Health Initiative to coordinate and implement research and*
 2 *activities of the National Oceanic and Atmospheric Admin-*
 3 *istration related to the role of the oceans in human health.*
 4 *In carrying out this section, the Secretary shall consult with*
 5 *other Federal agencies conducting integrated oceans and*
 6 *human health research and research in related areas, in-*
 7 *cluding the Centers for Disease Control, the National*
 8 *Science Foundation, and the National Institute of Environ-*
 9 *mental Health Sciences. The Oceans and Human Health*
 10 *Initiative shall provide support for—*

- 11 *(1) program and research coordination;*
- 12 *(2) an advisory panel;*
- 13 *(3) one or more National Oceanic and Atmos-*
 14 *pheric Administration national centers of excellence;*
- 15 *(4) research grants; and*
- 16 *(5) distinguished scholars and traineeships.*

17 *(b) ADVISORY PANEL.—The Secretary shall establish*
 18 *an oceans and human health advisory panel to assist in*
 19 *the development and implementation of the Oceans and*
 20 *Human Health Initiative. Membership of the advisory*
 21 *group shall provide for balanced representation of individ-*
 22 *uals with multi-disciplinary expertise in the marine and*
 23 *biomedical sciences. The Federal Advisory Committee Act*
 24 *(5 U.S.C. App.) shall not apply to the oceans and human*
 25 *health advisory panel.*

1 (c) NATIONAL CENTERS.—

2 (1) *The Secretary shall identify and provide fi-*
3 *nancial support through a competitive process to de-*
4 *velop, within the National Oceanic and Atmospheric*
5 *Administration, for one or more centers of excellence*
6 *that strengthen the capabilities of the Administration*
7 *to carry out programs and activities related to the*
8 *oceans' role in human health. Such centers shall com-*
9 *plement and be in addition to the centers established*
10 *by the National Science Foundation and the National*
11 *Institute of Environmental Health Sciences.*

12 (2) *The centers shall focus on areas related to*
13 *agency missions, including use of marine organisms*
14 *as indicators for marine environmental health, ocean*
15 *pollutants, marine toxins and pathogens, harmful*
16 *algal blooms, hypoxia, seafood testing, drug discovery,*
17 *and biology and pathobiology of marine mammals,*
18 *and on disciplines including marine genomics, ma-*
19 *rine environmental microbiology, ecological chemistry*
20 *and conservation medicine.*

21 (3) *In selecting centers for funding, the Secretary*
22 *will consider the need for geographic representation*
23 *and give priority to proposals with strong inter-*
24 *disciplinary scientific merit that encourage edu-*
25 *cational opportunities and provide for effective part-*

1 *nerships among the Administration, other Federal en-*
 2 *tities, State, academic, medical, and industry partici-*
 3 *pants.*

4 *(d) RESEARCH GRANTS.—*

5 *(1) The Secretary is authorized to provide grants*
 6 *of financial assistance for critical research and*
 7 *projects that explore the relationship between the*
 8 *oceans and human health and that complement or*
 9 *strengthen Administration programs and activities*
 10 *related to the ocean's role in human health. The Sec-*
 11 *retary shall consult with the oceans and human*
 12 *health advisory panel established under subsection (b)*
 13 *and the National Sea Grant College Program and*
 14 *may work cooperatively with other agencies partici-*
 15 *pating in the interagency program under section 3 to*
 16 *establish joint criteria for such research and projects.*

17 *(2) Grants under this subsection shall be award-*
 18 *ed through a peer-review process that may be con-*
 19 *ducted jointly with other agencies participating in*
 20 *the interagency program established in section 3 or*
 21 *under the National Oceanographic Partnership Pro-*
 22 *gram under section 7901 of title 10, United States*
 23 *Code.*

24 *(e) DISTINGUISHED SCHOLARS AND TRAINEESHIPS.—*

1 (1) *The Secretary shall designate and provide fi-*
 2 *nancial assistance to support distinguished scholars*
 3 *from academic institutions, industry or State govern-*
 4 *ments for collaborative work with scientists and fa-*
 5 *cilities of the Administration.*

6 (2) *In consultation with the Directors of the Na-*
 7 *tional Institutes of Health and the National Science*
 8 *Foundation, the Secretary of Commerce may establish*
 9 *a program to provide training and experience to sci-*
 10 *entists at the beginning of their careers who are inter-*
 11 *ested in the role of the oceans in human health.*

12 **SEC. 5. PUBLIC INFORMATION AND OUTREACH.**

13 (a) *ESTABLISHMENT.*—*The Secretary of Commerce, in*
 14 *consultation with the Centers for Disease Control, the Food*
 15 *and Drug Administration, the Environmental Protection*
 16 *Agency and the States, shall design and implement a na-*
 17 *tional public information and outreach program on poten-*
 18 *tial ocean-related human health risks, including health haz-*
 19 *ards associated with the human consumption of seafood.*
 20 *Under such program, the Secretary shall—*

21 (1) *collect and analyze information on ocean-re-*
 22 *lated health hazards and illnesses, including informa-*
 23 *tion on the number of individuals affected, causes and*
 24 *geographic location of the hazard or illness;*

1 (2) *disseminate the results of the analysis to any*
 2 *appropriate Federal or State agency, the public, in-*
 3 *volved industries, and other interested persons;*

4 (3) *provide advice regarding precautions that*
 5 *may be taken to safeguard against the hazard or ill-*
 6 *ness; and*

7 (4) *assess and make recommendations for observ-*
 8 *ing systems to support the program.*

9 (b) *SEAFOOD SAFETY.—To address health hazards as-*
 10 *sociated with human consumption of seafood, the Secretary,*
 11 *in consultation with the Centers for Disease Control, the*
 12 *Food and Drug Administration, the Environmental Protec-*
 13 *tion Agency and the States, shall perform a coordinated as-*
 14 *essment of risks and benefits associated with seafood han-*
 15 *dling and consumption.*

16 **SEC. 6. AUTHORIZATION OF APPROPRIATIONS.**

17 (a) *NOAA OCEANS AND HUMAN HEALTH INITIA-*
 18 *TIVE.—There are authorized to be appropriated to the Sec-*
 19 *retary of Commerce to carry out the NOAA Oceans and*
 20 *Human Health Initiative established under section 4,*
 21 *\$10,000,000 for fiscal year 2004, \$12,000,000 for fiscal year*
 22 *2005, \$15,000,000 for fiscal year 2006, and \$20,000,000 for*
 23 *each of fiscal years 2007 and 2008.*

24 (b) *PUBLIC INFORMATION.—There are authorized to be*
 25 *appropriated to the Secretary to carry out the public infor-*

- 1 *mation and outreach program established under section 5,*
- 2 *\$3,000,000 for each of fiscal years 2004 through 2007.*

Calendar No. 403

108TH CONGRESS
1ST SESSION

S. 1218

[Report No. 108-203]

A BILL

To provide for Presidential support and coordination of interagency ocean science programs and development and coordination of a comprehensive and integrated United States research and monitoring program.

NOVEMBER 19, 2003

Reported with an amendment